



Alan C. Lloyd, Ph.D.
Agency Secretary

Air Resources Board

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Arnold Schwarzenegger
Governor

September 13, 2005

Mr. Don Newburry
Research & Development Manager
MIRATECH Corporation
4224 South 76th East Avenue
Tulsa, Oklahoma 74145

Dear Mr. Newburry:

The Air Resources Board (ARB) has reviewed the MIRATECH Corporation application for the Conditional Verification of the combiKat[®] CBS Particulate Trap. Based on the evaluation of the data provided, the ARB hereby conditionally verifies that the combiKat[®] CBS Particulate Trap reduces emissions of diesel particulate matter (PM) by 85 percent or greater for use in stationary emergency generators and pumps with engines listed in the enclosure labeled, 'Attachment 1'. The combiKat[®] CBS Particulate Trap is therefore conditionally verified as a Level 3 diesel emission control device, subject to the terms and conditions specified below.

The required emissions and durability testing of the combiKat[®] CBS Particulate Trap are being performed per the testing protocol "Proposed Verification Testing Protocol for the CBS Soot Trap" submitted to the ARB and approved in February, 2005. Currently, the system has completed 168-hours of durability testing, including 72 cold starts, with positive results, making the system eligible for Conditional Verification. The full approval process requires several sets of emissions tests and 500 hours of durability testing for standby engines, designed to cover both generators and pumps simultaneously.

The ARB stationary emergency generators and pumps verification approval test program for the combiKat[®] CBS Particulate Trap consists of six phases:

- A. Baseline Emissions Testing
- B. Zero-hour Control Device Emissions Testing
- C. Durability Testing (0 - 168 hr)
- D. Post 168 hr Conditional Verification Emission Test
- E. Durability Testing (168 - 500 hr)
- F. Post 500 hr Control Device Emissions Testing

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

The first four phases have been completed for this conditional verification, phases E and F are required for emergency standby diesel powered generators and pumps. If all durability and testing are conducted on diesel powered generators, an additional 200 hours of field operation is required for the diesel powered pumps. Because field testing was chosen, Phases E and F, plus the additional 200 hours of field operation, must be completed within three years after receiving conditional verification. If these conditions of verification are not satisfied by the aforementioned time period, the verification is automatically terminated. For the aforementioned time period, conditional verification is equivalent to verification for the purpose of satisfying the requirements of in-use emission control regulations.

The aforementioned conditional verification is valid provided the following operating criteria are met:

Parameter	Value
Application	Stationary Emergency Power Generation or Pumping
Size Range	Less than 7 MW
Engine Type	Diesel, with or without turbocharger, certified to 0.4 g/bhp-hr or less of PM
Minimum Exhaust Temperature for Filter Regeneration	The engine must operate at the load level required to achieve sufficient exhaust temperature for regeneration at the rated PM level of the engine, per Figure 5. Operation at lower temperatures is allowed, but only for a limited duration. Per Figure 5, operate in the "Passive Regeneration Okay" side of the graph for at least 30 Minutes.
Maximum Consecutive Minutes Operating Below Passive Regeneration Temperature	720 Minutes
Number of Cold Start and 30 Minute Idle Sessions before Regeneration Required	24
Number of Hours of Operation Before Cleaning of Filter Required	Project Specific. 2000 Hours Typical.
Fuel	California on-road or off-road diesel with 500 ppm limit on the sulfur content. Biodiesel is not acceptable for this verification.
PM Verification Level	Level 3 Verification: At least 85% reduction of PM.

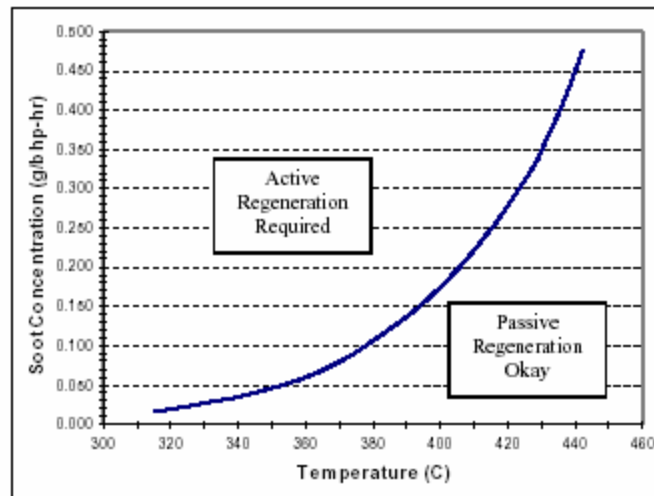


Figure 5. Passive Regeneration Temperature Requirements.

Since there may be significant variations from application to application, MIRATECH Corporation will review actual operating conditions (duty cycle, baseline emissions, exhaust temperature profiles, and engine backpressure) prior to retrofitting an engine with a combiKat[®] CBS Particulate Trap to ensure compatibility.

Furthermore, the engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer. MIRATECH Corporation must install the Dwyer, Series 300 SGT Photohelic Differential Pressure Switch/Gage Transmitter, a backpressure monitor, on all engines retrofitted with a combiKat[®] CBS Particulate Trap.

The ARB hereby assigns the combiKat[®] CBS Particulate Trap the designated family name of:

CA/MES/2005/PM3/N00/ST/DPF01

This identification number should be used in reference to this conditional verification as part of the system labeling requirement.

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, MIRATECH Corporation is responsible for honoring their warranty (Section 2707) and conducting in-use compliance testing (Section 2709).

Mr. Don Newburry
September 13, 2005
Page 4

Thank you for participating in ARB's diesel emission control strategy verification program. Should you have any questions or comments, please contact Mr. John Lee, Air Resources Engineer, at (916) 327-5975.

Sincerely,

/s/

Daniel E. Donohoue, Chief
Emission Assessment Branch, SSD

Attachment

cc: John Lee, Air Resources Engineer
Technical Analysis Section, SSD